

**REMARKS**

Claims 1-20 are pending in this application. Claims 13-16 are rejected under 35 U.S.C. §103(a) and claims 1-12 are withdrawn from consideration. By this Amendment, claims 17-20 are added. Support for the new claims can be found in the specification at least at page 7, lines 3-7, and in the Examples. Thus no new matter is added. In view of the following remarks, reconsideration and allowance are respectfully requested.

The courtesies extended to Applicants' representative by Examiner Shewareged in the telephone interview held October 3, 2003 are appreciated. The reasons presented in the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview. Specifically, Applicants provide additional comparative data showing superior results from the claimed process to comply with the Examiner's helpful suggestions made during the interview.

**I. Rejection under §103**

Claims 13-16 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,174,607 to Sugita et al. ("Sugita") in view of U.S. Patent No. 5,279,884 to Kitamura et al. ("Kitamura") and U.S. Patent No. 6,156,416 to Daems et al. ("Daems"). Applicants respectfully traverse this rejection.

Claim 13 recites a process for preparing a thermal transfer recording medium that includes "applying a composition for forming a solvent-resistant layer mainly containing a polyester resin and a polyethylene wax on a substrate in the form of a film and drying it to form a solvent-resistant layer." Sugita fails to teach or suggest such a process. Further, Kitamura and Daems fail to remedy the deficiencies of Sugita.

**A. The claimed recording medium, having a combination of polyethylene wax and polyester resin, is superior to that taught by Sugita.**

Sugita describes a thermal transfer recording medium that includes an ink layer and a release layer. The release layer includes a polyethylene wax or a polyester resin (see, Example 1). The Office Action asserts that the Sugita release layer is equivalent to the claimed solvent-resistant layer. The Office Action further states that even though Sugita does not teach a release layer/solvent-resistant layer containing both a polyester resin and a polyethylene wax as claimed, it would have been obvious to combine the two. The Office Action takes the position that polyethylene wax and polyester resin perform the same function, provide the same effect, and would supplement each other in the release layer. Thus, the Office Action concludes that it would have been obvious to combine the separate ingredients as recited in claim 13. Applicants respectfully disagree with this assertion.

Nothing in Sugita teaches or suggests a process for preparing a recording medium including a release layer containing a combination of wax and resin as in claim 13. Applicants have demonstrated that the claimed process achieves unexpected, superior results relative to the teachings of Sugita. In the Examples disclosed in the specification, at pages 10-14, a thermal transfer recording medium prepared as claimed provided superior properties compared to the media taught by Sugita.

As summarized in Table 1, at page 15, Examples 1-8 utilized a solvent resistant layer having a combination of polyester resin and polyethylene wax; Comparative Examples 1-4 used polyester resin alone. Utilizing the claimed resin/wax combination, Examples 1-8 yielded recording media having superior coating properties, solvent resistance, printing quality and sensitivity, compared to Comparative Examples 1-4 that used polyester resin alone. In total contrast to the recording media that used polyester resin and polyethylene wax within the scope of the claims, recording media that included only a polyester resin in the

release layer/solvent resistant layer was totally unsuitable for practical use. Recording media that includes the claimed combination of polyester resin and polyethylene wax is superior to anything taught by Sugita.

**B. The Rule 132 Declaration further proves that the claimed recording medium is superior over anything taught or suggested by the prior art**

In addition to having superior properties over polyester resin alone, the claimed recording medium, having the combination of polyester resin and polyethylene wax as claimed, provides superior results over a medium produced from polyethylene wax alone. The data in the Rule 132 Declaration, submitted herewith, shows that a release layer/solvent resistant layer using a combination of polyester resin and polyethylene wax has coating and solvent resistance properties that are superior to that of polyethylene wax used alone. As shown in Comparative Example 5, recording media utilizing only polyethylene wax with no addition of polyester resin in the release layer/solvent resistant layer has poor solvent resistance. The data illustrates that the combination of polyester resin and polyethylene wax is unexpectedly superior to polyethylene wax alone. Sugita does not teach or suggest this result.

**C. The claimed combination of polyester resin and polyethylene wax is not equivalent to either component used alone.**

Contrary to the position taken in the Office Action, Applicants have shown that the combination of polyester resin and polyethylene wax do not produce the same effect as one component or the other alone. Rather, the claimed process employing a combination of polyester resin and polyethylene wax provides enhanced results, as exemplified by the disclosed thermal transfer recording media having good coating properties, excellent solvent resistance and favorable printing quality (see specification, Table 1 and Rule 132 Declaration). For at least these reasons, Sugita does not teach or suggest the process for

preparing a thermal transfer recording medium of claim 13, and claims 14-19 dependent thereon.

**D. Kitamura and Daems do not remedy the deficient teachings of Sugita.**

Kitamura and Daems both fail to remedy the deficiencies of Sugita. Kitamura describes a thermal transfer recording medium having a multi-layered "release layer" that includes a heat-meltable peeling layer, an intermediate layer of ethylene-vinyl acetate, and a heat-meltable adhesion layer. Nowhere does Kitamura teach or suggest a process for preparing a recording medium that includes forming a release layer/solvent-resistant layer containing polyester resin and polyethylene wax on a substrate in the form of a film and drying it, as recited in claim 13.

Daems also fails to remedy the deficiencies of Sugita. Daems describes electrophotographic printing methods that employ methyl ethyl ketone as a solvent. Daems does not teach or suggest a process for forming a transfer medium including a solvent-resistant/release layer containing the claimed combination of polyester resin and polyethylene wax. Thus, both Kitamura and Daems, alone or in combination with Sugita, fail to teach or suggest the preparation of the thermal transfer recording medium of claim 13.

**E. Conclusion**

As set forth above, Sugita, in view of Kitamura and Daems, would not have rendered obvious to one of ordinary skill in the art the claimed process for preparing a thermal transfer recording medium. The claimed process includes the formation of a solvent resistant layer mainly containing a polyester resin and a polyethylene wax on a substrate. Contrary to the position stated in the Office Action, polyester resin and polyethylene wax are not mere equivalents as allegedly taught by Sugita. As shown by the data in the specification and in the Rule 132 Declaration, a release layer/solvent resistant layer formed from the claimed



Combination of polyester resin and polyethylene wax is superior to that formed from polyester resin or polyethylene wax alone.

For at least this reason, Sugita, Kitamura and Daems would not have rendered obvious the method of claim 13, and claims 14-19 dependent thereon. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

## II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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Attachment:  
Rule 132 Declaration

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